Nutrition News

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RESEARCH—A BEACON TO PROGRESS

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The present war emergency has focused attention on the importance of good nutrition. The program for better nutrition makes it especially desirable to consider any results of recent research and to promote more research studies. Research is a beacon to the progress of good nutrition for all—fundamental to a strong, healthy citizenry.

Co-ordinated Research

We need more interest in research. A greater appreciation of the interrelations of human and animal nutrition and a larger development of co-ordinated research in both fields would accelerate our progress in the improvement of both man and animals. A basis would also be provided for more effective service of agriculture to human needs and to national welfare.

A study of the principles of nutrition provides knowledge that can be applied to both animals and man. Of course, the application must be modified for the various species, but the same basic knowledge is useful in all cases.

In studying the feeding of animals, we can obtain information of value for the nutrition of man, also. Actually, most of our modern knowledge of human nutrition is based upon animal experimentation and much of this research was carried out with the better feeding of farm animals as the goal. Animal research frequently provides the best approach to the solution of human problems.

For the study of the problems still before us, a realization of the interrelationships among species and of the identity of the principles involved is important. This enables the investigator to select the most suitable species for studying a given problem and then to apply the finding to the species in which he is particularly interested.

The nutritionist who has some appreciation of the physiology of various species finds this knowledge valuable in his study of the nutrition of man. He is also in a position to visualize the more general application of any principles he discovers, through a realization that many of the results with different species, including man, are mutually applicable.

Food For Man

Furthermore, co-ordinated research in animal and human nutrition is important because animals provide human food. Information as to the nutrients needed and the physiological functions they perform is the essential basis for better human nutrition.

This information is useful, however, only as it can be translated into foods. Knowledge as to how to make available a food supply containing the nutrients needed is as important as a knowledge of the nutrients themselves. Thus, both human and animal nutrition are based on agriculture. The nutritive value of our food crops is influenced by various genetic and cultural factors. Similarly, the feed of our farm animals influences not only their growth and productivity, but also the nutritive value of their products used for human food.

One of the reasons milk and butter are classed as protective foods of special value in the human diet is vitamin A content. Animal nutrition studies

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have shown that this content can be increased by improving the feed of the cow.

It is important—in animal nutrition research—to keep in mind the constituents of animal products which are of special value in the human diet. These constituents give animal products an important place in the food economy of man. Here, of course, milk is pre-eminent. No other food contains as many of the special nutritive values.

Co-ordinated human and animal research should prove of special value in the present emergency. The improvement of health and welfare through better nutrition is of outstanding importance. We need an increased food supply to see that everyone gets enough to eat. We especially need more of the foods of higher nutritional quality, such as animal products, and particularly milk.

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Glances AT NUTRITION RESEARCH

Wartime conditions have emphasized the desire for more nutrition information on the part of the general public. Research reports similar to those reviewed below are convenient sources of such information.

Dehydrated Foods—Fruits dehydrated under the new factory processes retain more vitamins than those preserved by sun-drying. Dehydrated vegetables tend to retain more vitamins than the same vegetables canned. The vitamin C loss for several dehydrated vegetables ranged from 20% to 80%; for thiamine 14% to 33%; and for riboflavin 25% to 50%. The carotene destruction was small in all of the vegetables tested, while one third to one half of the nicotinic acid was lost.

Science News Letter (Nov. 28) 1942.

Thiamine in Fat Synthesis—By studying increases in the body fat of rats in response to various supplements of the B-vitamins after long periods on low-fat diets, thiamine was found to be no more effective than other B-vitamins in fat synthesis. The workers also observed that thiamine will not prevent rapid losses of fat when the diet is deficient in other B-vitamins.

J. Biol. Chem. 145:163 (Sept.) 1942.

Ascorbic Acid Synthesis — In an attempt to obtain information as to the site of synthesis of ascorbic acid in the bodies of rats, experiments were conducted in which chloretone was added to the diet of the rats. This compound causes an increase in the urinary excretion of ascorbic acid. The high concentration of ascorbic acid in the ovary and in the pituitary and adrenal glands may be interpreted as indicating either storage or synthesis by these tissues. These glands were removed from a group of rats and the effects on ascorbic acid synthesis determined. It was found that chloretone-fed animals were still capable of synthesizing ascorbic acid after these glands were removed. These results are interpreted to mean that no particular organ or gland is involved but that ascorbic acid synthesis is a general metabolic function.

J. Biol. Chem. 144:183 (June) 1942.

Mineral Metabolism of College Women—Calcium, phosphorus, and nitrogen intakes and retentions were studied for (a) 124 college women eating their customary self-chosen diets; (b) one individual for forty-four 5-day periods; and (c) a group of nine young women eating basal diets supplemented with 1, 2, and 3 cups of milk, respectively. Analysis of the results shows that mean daily intakes of 0.8 gm. calcium, 1 gm. phosphorus, and 9 gm. nitrogen, respectively, were required for equilibrium. The type of diet was shown to be one of the factors influencing calcium retention. When calcium intakes were similar, a larger percentage of subjects on milk-supplemented diets stored calcium than did those eating self-chosen diets.

J. Nutrition 24:367 (Oct.) 1942.

TIMELY TOPICS

Dr. Maynard

Dr. Leonard A. Maynard, author of the leading article in this issue, is director of the School of Nutrition at Cornell University, Ithaca, New York. He is a member of the Food and Nutrition Board and chairman of the Committee on Animal Nutrition, both of the National Research Council. Among other prominent positions, Dr. Maynard is president of the American Institute of Nutrition and president of the American Society of Animal Production.

Food Administration

The vital importance of nutrition in the war and peace effort within the United States has been fully acknowledged by the appointment of a national food administrator. In the prospective enlarged food program for this country, nutrition education will fill an even more important role now than at any previous period.

Food for the World

The allocation of foods and other rehabilitation resources to countries occupied by the Allied Nations is an important responsibility of this country. With the appointment of a director of these operations, recognition is given to the ever-increasing feeding job which we will have as war progresses and peace plans materialize. This development forcefully demonstrates the greatly augmented responsibility of nutritionists to the health and welfare of the world today—and tomorrow.

NUTRITION AND THE MANPOWER PROBLEM

By Dr. Clifford Kuh, Chief, Bureau of Industrial Health, California State Department of Public Health

War accentuates our nutritional requirements. We change shifts, break into new jobs, have long hours, hard work, and transportation difficulties. All these place unusual strain on the human organism. New problems arise when women take over men's jobs in the plants. When the woman works, the cook is out. This raises problems affecting every member of the family.

In the face of all this, we have workers with notoriously poor food habits. A study of 33 industries revealed that only 10 to 15 per cent selected a half-pint of milk for their luncheon.

The most serious food problems are presented in the mushroomed plants. What is the solution? Education. Long ago we should have required our schools to include a program of practical nutrition education. It is not too late now.

The California Bureau of Industrial Health is promoting a six-point program throughout the state:

1. A general educational program for the public on nutrition.
2. An educational program within the plant to advise workers what to eat and why.
3. Improved nutritional facilities within the plant including cafeterias, canteens, mobile food units, and a nutritionist in the larger plants.
4. Education of restaurant owners who serve workers and of concessionaires who sell lunch boxes.
5. Education of the workers' wives on how to pack nourishing lunches.
6. Presentation of meal plans and demonstrations.

Feeding Facilities

There should be some method of making the box lunch with milk available within the plant at mealtime. Proper distribution is the great problem, and the key factor in getting freshly prepared lunches to workers. Then we need to make food available for between-meals.

One big plant in California has three large cafeterias where breakfast, dinner, and supper are served. Each has a canteen where ice cream may be purchased in cartons. For quicker service, there are booths in convenient locations and a number of mobile food units.

Another plant has a cart service carrying hot food, milk, and ice cream. In another instance milk is sold from delivery trucks.

Educational Activities

It is vital that nutrition information get into the homes of workers. But we also must reach concessionaires who sell box lunches. It will not be enough merely to prepare recipes and factual information. The nutrition program must be packaged and sold as a patriotic, essential, and vital effort to help win the war and to keep us fit to win the peace.

Changing the eating habits of industrial workers is largely an educational problem and progress will be slow. Importance of the lunch box must be made convincing and suggestions for menus and their preparation must be practical and simple.

A great deal of literature is available. The problem is one of effective distribution and use. The California Department of Public Health has published a circular on good nutrition for the war worker.

State and County Nutrition Councils are carrying on educational programs. There is evidence that concessionaires already have responded by improving the quality of food in plate lunches and box lunches.

Lunch box derbies, a community enterprise in each city, have been held with women in CIO and AFL auxiliaries serving with nutritionists as judges. A poster showing meat alternates is being posted in public markets and other places where homemakers gather. Dairy Council is taking active part in these programs, as well as working with the Red Cross, Nutrition Councils, power and appliance companies, and home economics groups.

Someone has said, "While industrializing the West, let us do it with healthy workers." A good nutrition program is a good start.

HELPING THE COMMUNITY IMPROVE ITS NUTRITION

By Dr. John W. Amesse, Chairman, and Mrs. Kate W. Kinyon, Co-Chairman, Nutrition Committee, Denver

The homemakers of Denver are interested in making a reality of the timely slogan, "Know Your Foodstuffs, Eat for Health and Victory." From October, 1941, to September, 1942, more than 5,500 women enrolled in approximately 187 nutrition classes. These classes were made possible through the Nutrition Committee of the Denver Defense Council.

On this committee are representatives of local organizations and agencies interested in co-operating to improve nutrition in the community. Some of the organizations co-operating are American Women's Volunteer Services, Red Cross, American Medical Association, public schools, Adult Education Council, Bureau of Public Welfare, Denver Dairy Council, and various church, social, and service groups.

The program is guided by a steering committee selected by the Nutrition Committee from its membership, and a Nutrition Co-ordinator, a nutritionist whose job is to help in the organization of classes, assignment of teachers, and to study the needs of groups. Most of the personnel is volunteer. At the present time, approximately 40 teachers are participating in the project.

One of the major concerns of the Nutrition Committee is training teachers for the job. Standards of preparation and experience have been set up. Classes in teacher education are conducted. The chief emphasis is on how to help adults learn.

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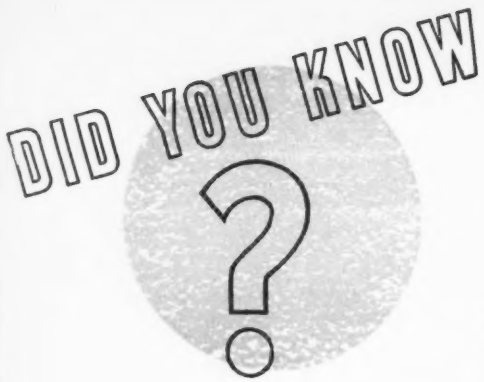

—that the first bartered food in America was milk that the Norsemen gave to the American natives for furs?

—that pine needles are one of the sources of vitamin C found worth gathering in Soviet Russia?

—that a healthy adult has in his body about 25 trillion red blood corpuscles and 30 billion white corpuscles?

—that Swiss cheese is one of the most difficult of all cheeses to make? Certain bacteria are instrumental in forming the "eyes" in Swiss cheese and in developing the characteristic flavor.

—that growing boys, active in sports, often eat more than 4,000 calories per day?

—that the consumption of ice cream has increased 155 per cent during the past decade?

—that a ship's ton of canned boiled potatoes weighs 920 pounds, the same ship's ton of dehydrated potatoes reconstituted weighs 3,980 pounds?

—that two thirds of the 11,000,000,000 pounds of fats and oils used in America each year, goes for food; one fifth for soap?

—that Mexico is now supplying the vanilla which we used to import from Madagascar?

THINGS YOU'LL LIKE TO READ

NUTRITION IN INDUSTRY BIBLIOGRAPHY—American Dietetic Association, 1942. 25 cents.

Brief mimeographed annotated bibliography of recent articles and bulletins on nutrition in industry—specific activities and general information about the field.

FOOD CHARTS—Foods as Sources of the Dietary Essentials — Council on Foods and Nutrition of the American Medical Association and Food and Nutrition Board of the National Research Council. American Medical Association, 1942. 10 cents.

Charts and descriptive material give the composition and nutritive value of foods for the purpose of indicating the principal sources of each of the dietary essentials. Particularly useful for teachers.

FOOD VALUES IN SHARES AND WEIGHTS—Clara Mae Taylor. Macmillan Company, 1942. $1.50.

Series of tables giving nutritive values of some 500 foods and food combinations. Values are listed for commonly used portions of foods.

1942 publications of United States Government Agencies available from the Superintendent of Documents, Washington, D. C.

DEMOCRACY MEANS ALL OF US—Community organization for a nutrition program.—Free.

FOOD FOR THOUGHT—The School's Responsibility in Nutrition Education —15 cents.

FOOD FOR YOUNG CHILDREN IN GROUP CARE—Miriam E. Lowenberg —10 cents.

THE FOOD FRONT — A series of Eleven Nutrition Lectures—Free.

HELPING THE COMMUNITY IMPROVE ITS NUTRITION

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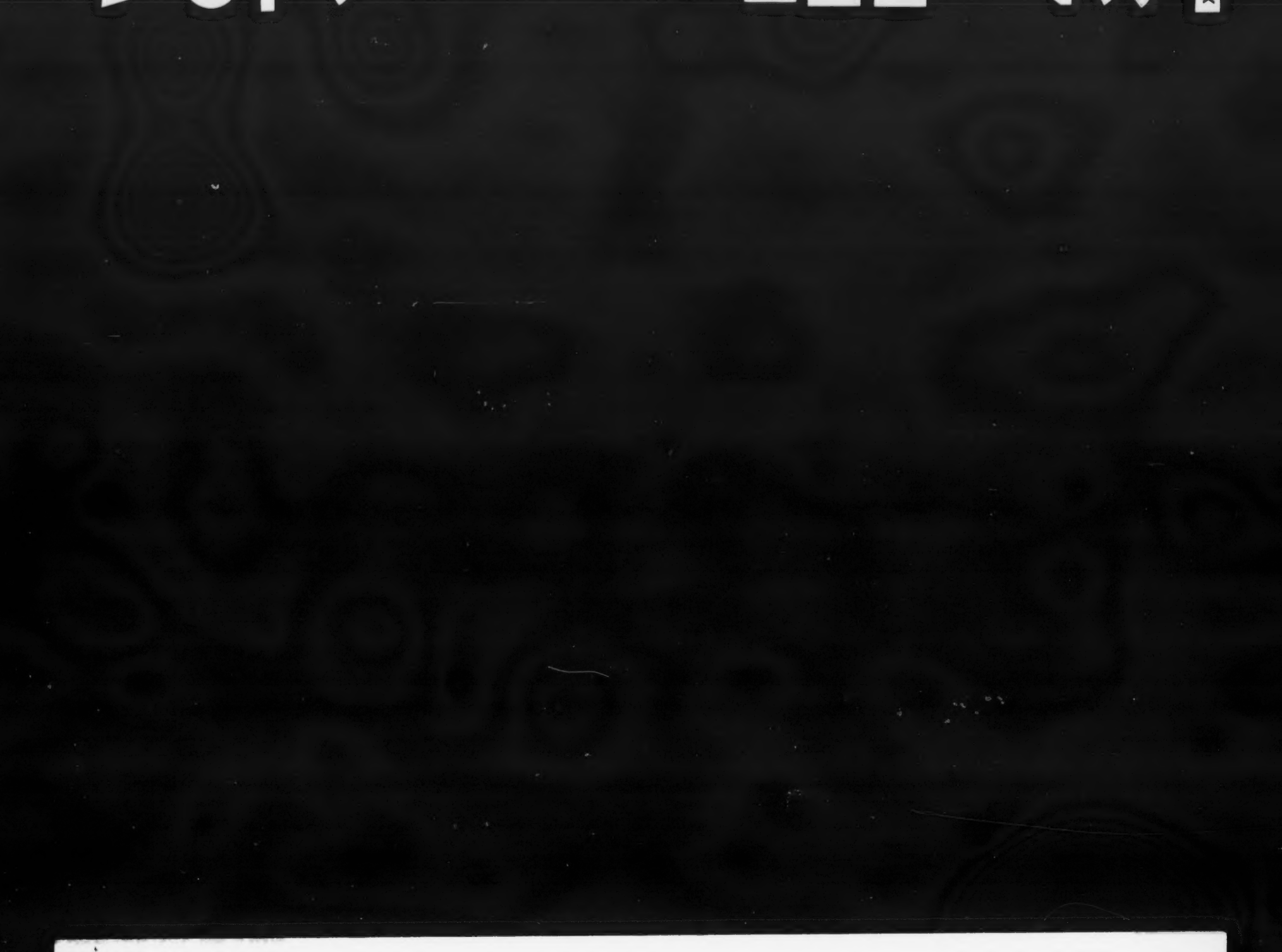
Another major concern of the committee is to help the adult solve his nutrition problems. Therefore, the members of each class are given an opportunity to participate in planning the type of problems to be considered. As a result of this pupil-teacher planning, several types of activities are going on. Some groups are interested in nutrition information; others in buying problems; and still others in demonstrations of food preparation, service, and recipes.

The total number of classes this month is 91 with an enrollment of 1,124. All are interested in knowing how to plan an adequate diet within the rationing pattern now in effect and with foods soon to be rationed. At the present time, a nutrition class for business men is in progress.

Another interesting type of activity sponsored by the Nutrition Committee is a Nutrition Consultation Service. The visiting nurses meet once each week with the Nutrition Co-ordinator for the purpose of obtaining help on the food problems they encounter in their work.

A volunteer nutritionist is a member of the staff of the well-baby clinic. She helps individual mothers with feeding problems of young children. The mothers coming to this clinic ask for food demonstrations on ways of preparation of fruits and vegetables for babies. Consultation service in nutrition is also furnished to the Consumer Education Center.

The Department of Health Education of the Denver Public Schools is sponsoring a "better lunch" program for school children. The Nutrition Committee is co-operating to enlarge the scope of this project to include a better lunch for all adults who must carry a lunch. Posters and exhibits are to be placed in downtown business places. The Nutrition Committee is devoting the current issue of its bulletin, "Nutrition for Victory," to this campaign. The central theme is "Pack a Lunch a Child Can Grow On; Pack a Lunch a Man Can Work On."

The Red Cross and the Nutrition Committee are developing plans for the establishment of neighborhood centers for training in canteen service. With the extension of the food rationing program a demand for help in gardening and in food preservation by canning and drying, is knocking at the door of the Nutrition Committee. This demand will receive attention and as much help as possible will be given.